

Cyclones and gales.—Few important cyclones occurred during May, and shipping was little affected by stormy conditions; vessels reported few gales and these apparently were local. On the 3d and 4th, south gales of force 10 occurred east of Japan, associated with a cyclone central over the Japan Sea. On the 2d a whole gale was experienced near 44° N., 176° E., in connection with an Aleutian disturbance. On several days strong northwest winds were encountered off the coast of Lower California, but the highest velocity was only that of a fresh gale, on the 23d.

A small cyclone developed south of the Gulf of Tehuantepec on May 30; a fresh southwest gale was reported at 8 p.m. near 12°30' N., 93° W.; at 1 p.m. of the 31st the American steamer *Pennsylvanian*, in 13°47' N., 93°30' W., had a corrected barometer reading of 29.44 inches, with a light northwest wind—the maximum velocity experienced was of force 11 from the north. The cyclone seems to have filled in rapidly on that date off the Guatemalan coast.

Fog.—Two to eight or more days with fog were experienced by ships along that part of the northern routes lying west of longitude 145° W. The most frequent and extensive fog banks of this great area occurred between the western Aleutians and the Kuril and Japanese islands. Fog was reported on 7 days off the California coast and on 3 days off Lower California and Cape Corrientes.

INTENSE HURRICANE IN THE SOUTH PACIFIC OCEAN, APRIL 6-12, 1933

By WILLIS E. HURD

The Weather Bureau has received through the Hydrographic Office at Cristobal, Canal Zone, a report of an intense hurricane in tropical waters of the South Pacific during April 1933. The report was furnished by the French steamship *Boussole*; Captain Courcet; observer Winnaert.

According to the information given by this ship, which inclosed a supplemental report from the French steamship *Bucephale*, the hurricane probably originated very early in the month to the northward of the Fiji Islands. The *Bucephale*, lying at anchor in Surrender Bay, New Hebrides, experienced moderate to fresh gales, mostly southwesterly, on the 6th and 7th. At 2 a.m. of the 8th the barometer (correction unknown) at Epi Island fell to 711 mm (27.99 inches), with an east wind of hurricane force that ruined even stone-built houses.

The *Boussole* lay at Noumea, New Caledonia, on the 9th and 10th, and experienced hurricane winds during the early hours of the 10th, lowest pressure 28.92 inches. The gale there lasted for 19 hours. A storm wave in Noumea Roads threw one steamer ashore on the rocks, and caused the loss of many lighters and small boats. The city itself experienced considerable damage.

According to a radiogram received at Noumea on the 12th from Brisbane the cyclone, still intense, was central about 400 miles southwest of Kunie Island (Isle of Pines), New Caledonia, moving in an east-southeast direction.

CLIMATOLOGICAL TABLES

CONDENSED CLIMATOLOGICAL SUMMARY

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Condensed climatological summary of temperature and precipitation by sections, May 1933

[For description of tables and charts, see REVIEW, January, p. 37]

Section	Temperature								Precipitation					
	Section average	Departure from the normal	Monthly extremes						Section average	Departure from the normal	Greatest monthly		Least monthly	
			Station	Highest	Date	Station	Lowest	Date			Station	Amount	Station	Amount
Alabama.....	76.1	+4.8	Brewton (near).....	100	25	Valley Head.....	45	13	2.41	-1.51	Riverton.....	7.86	Elba.....	0.00
Arizona.....	62.6	-4.9	Quartzsite.....	113	29	Williams.....	8	11	.19	-.14	Mormon Lake.....	1.93	41 Stations.....	.00
Arkansas.....	71.8	+2.7	2 stations.....	96	19	3 stations.....	41	12	6.27	+1.24	Sunset.....	12.40	Carthage.....	2.30
California.....	55.2	-6.1	Greenland Ranch.....	114	29	Twin Lakes.....	-4	8	1.61	+ .60	Crescent City (near).....	12.44	5 stations.....	.00
Colorado.....	50.5	-1.5	Las Animas.....	99	23	Lake Moraine.....	-3	13	1.92	+ .04	Hawthorne.....	4.80	Saguache.....	.68
Florida.....	78.9	+3.3	Blountstown.....	102	23	Glen St. Mary.....	52	19	2.59	-1.40	Fort Myers.....	6.86	Ocala.....	.51
Georgia.....	76.7	+5.0	2 stations.....	101	15	Clayton.....	42	9	2.76	-.66	Blairsville.....	11.10	2 stations.....	.68
Idaho.....	48.8	-3.9	Indian Cove.....	96	30	2 stations.....	11	18	1.65	-.94	Deadwood.....	4.31	Bakers Ranch.....	.40
Illinois.....	64.4	+2.0	2 stations.....	93	20	Freeport.....	32	4	8.02	+3.87	Anna.....	12.09	Pearl.....	4.53
Indiana.....	65.0	+2.9	Edwardsport.....	93	21	3 stations.....	31	4	8.14	+4.08	Princeton.....	12.86	Albion.....	3.66
Iowa.....	60.5	+ .6	3 stations.....	93	18	7 stations.....	32	13	4.36	+ .23	Burlington.....	10.46	Little Sioux.....	.33
Kansas.....	64.3	+ .7	Ellsworth.....	105	19	St. Francis.....	32	13	3.80	+ .09	Parsons.....	11.27	Anthony.....	.92
Kentucky.....	68.7	+5.4	Frankfort.....	95	25	2 stations.....	40	7	6.43	+2.41	Cold Spring.....	10.46	Lexington.....	3.47
Louisiana.....	77.9	+4.2	2 stations.....	97	18	Robelline.....	50	3	4.65	+ .13	Franklinton.....	9.32	Port Eads.....	.60
Maryland-Delaware.....	65.0	+2.6	Bell, Md.....	94	27	Oakland, Md.....	34	22	5.42	+2.01	Grantsville, Md.....	8.62	Aberdeen, Md.....	3.79

1 Other dates also.